ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
Bruhat Bengaluru Mahanagara Palike

QAP

Name of Work: "Improvement to drain all around the parks at Bagalagunte ward no. 14 in Dsarahalli zone ward No. 14".

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Check Parameter	Acceptance Standard	Performance Standard	Frequency	Acceptance Criteria
Cement				
Cement 43 Grade				
Physical Tests				
Standard Consistency	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 4)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	Not Specified
Initial Setting Time	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 5) 1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	30 minutes Minimum
Final Setting Time	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 5)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	600 minutes Maximum
Compressive Strength i) At 3 days	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 6)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	Not less than 23 Mpa Strength

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Check Parameter	Acceptance Standard	Performance Standard	Frequency	Acceptance Criteria
ii) At 7 days	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 6)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	Not less than 33 Mpa Strength
iii) At 28 days	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 6)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	Not less than 43 Mpa Strength
Specific Gravity	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 11)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	3.15 Minimum
Fineness of Cement	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 1)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	10 % Maximum
Soundness (Le-Chatlier method)	MORT&H Specifications for Roads & bridges Section-1000/Clause-1006	IS: 4031(Part 3)1988	1) At the beginning for approval of each source and change of source 2) One test per lot subject to a maximum of 500Tonnes	10 mm Maximum

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Check Parameter	Acceptance Standard	Performance Standard	Frequency	Acceptance Criteria
Concrete Works				
Coarse Aggregates				
Sieve analysis for all in aggregate	IS: 383-1970	IS: 2386 (Part 1a)1963	1) At the beginning for approval of each source and change of source 2) Once test for every days work of each fraction of coarse aggregate	20mm nominal size IS Sieve (mm) / % Passing by weight 40 / 100 20 / 95-100 4.75 / 30-50 0.600 / 10-35 0.150 / 0-6
Flakiness Index	MORT&H Specifications for Roads & bridges Section-1000/Clause-1007	IS: 2386 (Part 1)1963	1) At the beginning for approval of each source and change of source 2) Once in a month	35 % Maximum
Specific Gravity and Water absorption	MORT&H Specifications for Roads & bridges Section-1000/Clause-1007	IS: 2386 (Part 3)1963	1) At the beginning for approval of each source and change of source	-
Aggregate Impact Value	MORT&H Specifications for Roads & bridges Section-1000/Clause-1007	80	1) At the beginning for approval of each source and change of source 2) Once in a month	27 % Maximum

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Check Parameter	Acceptance Standard	Performance Standard	Frequency	Acceptance Criteria	
Sieve analysis for fine aggregate Zone - I	MORT&H Specifications for Roads & bridges Section-1000/Clause-1008 & Table-1000-2 & IS: 383-1970	IS: 2386 (Part 1a)1963	1) At the beginning for approval of each source and change of source	IS Sieve (mm)	% Passing by weight
				10	100
				4.75	90-100
				2.36	60-95
				1.18	30-70
				0.600	15-34
				0.300	5 -20
				0.150	0 -10
Sieve analysis for fine aggregate Zone - II	MORT&H Specifications for Roads & bridges Section-1000/Clause-1008 & Table-1000-2 & IS: 383-1970	IS: 2386 (Part 1a)1963	1) At the beginning for approval of each source and change of source	IS Sieve (mm)	% Passing by weight
				10	100
				4.75	90-100
				2.36	75-100
				1.18	55-90
				0.600	35-59
				0.300	8 -30
				0.150	0-10
Sieve analysis for fine aggregate Zone - III	MORT&H Specifications for Roads & bridges Section-1000/Clause-1008 & Table-1000-2 & IS: 383-1970	IS: 2386 (Part 1a)1963	1) At the beginning for approval of each source and change of source	IS Sieve (mm)	% Passing by weight
				10	100
				4.75	90-100
				2.36	85-100
				1.18	75-100
				0.600	60-79
				0.300	12 -40
				0.150	0-10
Specific Gravity and Water absorption	MORT&H Specifications for Roads & bridges Section-1000/Clause-1008	IS: 2386 (Part 3)1963	1) At the beginning for approval of each source and change of source	-	

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Check Parameter	Acceptance Standard	Performance Standard	Frequency	Acceptance Criteria
Steel				
Physical Tests				
Ultimate Tensile Strength	MORT&H Specifications for Roads & bridges Section-1000/Clause-1009.3	IS: 1786-1985	1) At the beginning for approval of each source and change of source 2) 1 Test per Consignment	10 % more than the actual 0.2% proof stress but not less than 485 Mpa
0.2 % Proof stress	MORT&H Specifications for Roads & bridges Section-1000/Clause-1009.3	IS: 1786-1985	1) At the beginning for approval of each source and change of source 2) 1 Test per Consignment	415 Mpa Minimum
Elongation	MORT&H Specifications for Roads & bridges Section-1000/Clause-1009.3	IS: 1786-1985	1) At the beginning for approval of each source and change of source 2) 1 Test per Consignment	14.50 % Minimum
Bend Test	MORT&H Specifications for Roads & bridges Section-1000/Clause-1009.3	IS: 1786-1985	1) At the beginning for approval of each source and change of source 2) 1 Test per Consignment	Bent to included angle of 135^0C
Re-Bend Test	MORT&H Specifications for Roads & bridges Section-1000/Clause-1009.3	IS: 1786-1985	1) At the beginning for approval of each source and change of source 2) 1 Test per Consignment	Bent to included angle of 157.5^0C

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Check Parameter	Acceptance Standard	Performance Standard	Frequency	Acceptance Criteria
Concrete				
Workability of fresh concrete	MORT&H Specifications for Roads & bridges Section-1700/Clause-1716	IS: 1199 - 1959	one test per each transit mixer at both batching plant and site initially when work starts.Subsequently sampling may be done from alternate transit mixers	PCC 50 $\pm$ 25 mm RCC 100 $\pm$ 25 mm
Compressive Strength of Concrete	MORT&H Specifications for Roads & bridges Section-1700/Clause-1716	IS: 516 - 1959	(1-5cum)/One set (6-15)/Two sets (16-30)/Three sets (31-50)/Four sets 51 and above 4 + 1 additional set for each 50 m^3	M10 - 10 Mpa M20 - 20 Mpa M25 - 25 Mpa M30 - 30 Mpa M35 - 35 Mpa M40 - 40 Mpa M45 - 45 Mpa

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Name of Work :	Improvement to drain all around the parks at Bagalagunte ward no. 14 in Dsarahalli zone ward No. 14								
Estimate Cost :	140.00 Lakhs	Tender Agreement no & Date.	BBMP/DZ/EE(PD)/WO/PR/10/2022-23 21/03/2023		Contractor.	Sri.H. Murty			
As Per tender/ Date of commencement of work :		21-03-2023	As Per tender /Date of completion of work.		20/06/2023				

Sl No	Materials required for finishined item of work	Unit	Quantity of Materials	Name of Test to be Conducted	No of Tests Required	No of test to be conducted	Frequency as per Relevent IS Codes and MoRTH Quality Plans	Reference	Remarks
				Concrete works					
1	40 mm and down size Coarse aggregate	Cum	283.43	Gradation	3.00	3.00	One Test per 100 Cum/ or Change in source	IS 383-2016, IS2386(part1 - 8)	Any change in source / visual observations, number of tests may be increased and subsequently on monthly basis
				Flakiness and Elongation index	1.00	1.00	Once at beginning for each source	IS 383-2016, IS2386(part1)-1963 &2430-1969	
				Impact value	1.00	1.00		IS 383-2016, IS2386(part IV)-1963 &2430-1969	
				Water Absorbtion	1.00	1.00		IS 383-2016, IS2386(part III)-1963 &2430-1969	
2	20 mm and 12.5 mm down size Coarse aggregate	Cum	455.51	Gradation	5.00	5.00	One Test per 100 Cum/ or Change in source	IS 383-2016, IS2386(part1)-1963 & sampling 2430-1969 ,4926-2003	Any change in source / visual observations, number of tests may be increased and subsequently on monthly basis
				Flakiness and Elongation index	1.00	1.00	Once at beginning for each source	IS 383-2016, IS2386(part1)-1963 &2430-1969	
				Impact value	1.00	1.00		IS 383-2016, IS2386(part IV)-1963 &2430-1969	
				Water Absorbtion	1.00	1.00		IS 383-2016, IS2386(part III)-1963 &2430-1969	

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Sl No	finishined item of work	Unit	Materials	Conducted	Tests Required	No of test to be conducted	and MoRTH Quality Plans	Reference	Remarks
3	Fine aggregate	Cum	455.51	Seive analysis	5.00	5.00	One Test per 100 cum or Change in source	IS 383-2016, IS2386(part 2)-1963 &2430-1969	Any change in source / visual observations, number of tests may be increased
4	Cement	Bags	3753.00	Normal Consistency	1	1.00	1 test for every 5000 bags/1 test for each consignment/ as decided by the engineer incharge	IS 269, IS 455, IS 1489, IS 8112-1989 IS 12269-1987	Any change in cement grade/brand test to be carried out
				Initial setting time	1	1.00			
				Final setting time	1	1.00			
				Compressive strength	1	1.00			
5	Steel	MT	26.37	Tensile test a) Dia of bar b) weight/mtr c) Yeild stress d) Tensile test	1	1.00	One Test for Each Consignment (all dia of rods)	IS 1786-2008 & IS1608-2005	Certificate from authorised testing labs followed by Manufactures certificate.
				Bend and re- bend test	1	1.00		IS 1786-2008 & IS1599-1985	
				Chemical Analysis	1	1.00		IS 1786-2008 & IS 228 (part1-24)	

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Sl No	required for finishined item of work	Unit	Quantity of Materials	Name of Test to be Conducted	No of Tests Required	No of test to be conducted	Relevent IS Codes and MoRTH Quality Plans	Reference	Remarks
6	RMC-Concrete M20/25/30	Cum	455.51	Mix Design	1	1.00	2 Tests per Day / as required at Site	IS 456-2000,IS4926-2003,IS 516-1959 & 1199-1959 IS 8112-1989 for 43 grade IS 12269-1987 for 53 grade	Mix design performed at the beginning of work by contractor & get approval from competent authority
				Slump Test					
				7 days Compressive Strength	10	10.00	1-5cum - 1 set, 5-15 cum- 2 set, 15-30cum- 3 set, 30-50cum - 4 set , above 50 cum- additio 1 set and above 100 cum - 1 set for every 100 cum . For RMC concrete 1 set for every 50cum or part/ As decided by Engineer Incharge		
				28 days Compressive Strength	10	10.00			

Note:

1 For Water Suppy, Sanitory, Electrical and other Items nessasary certificate indicating the quality as per the prescribed IS shall be obtained by the Authorised/Manufactures shall be obtained during the execution of the Work.

Assitant Engineer

Asiistant Executive Engineer

Asst. Executive Engineer
Project Division, Dasrahalli Zone
BBMP, Bangalore

Executive Engineer

Executive Engineer
Project Division
Dasarahalli Zone, BBMP

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